

WHAT IS CLAIMED IS:

1. A DSL modem apparatus comprising:
a transmitter that transmits a data signal to an opposing communication apparatus;
a receiver that receives a data signal from the opposing communication apparatus;
and
a control unit that alternatively switches between a transmission timeslot and a reception timeslot by mutually synchronizing with the opposing communication apparatus, and controls transmission and reception timings in order to transmit a data signal from said transmitter during a transmission timeslot and to receive a data signal at said receiver during a reception timeslot.
2. The DSL modem apparatus according to claim 1, wherein the DSL modem apparatus is a remote side DSL modem apparatus that periodically receives a PILOT signal from a center side and maintains symbol synchronization, and wherein the DSL modem apparatus uses a range of carrier indexes for an upstream, the range being the same as one being used for a downstream, the upstream being data transmission from the remote side to the center side, the downstream being data transmission from the center side to the remote side.
3. The DSL modem apparatus according to claim 2, wherein a PILOT signal in the downstream is received and processed even during a transmission timeslot.
4. A communication control method comprising:
alternatively switching between a transmission timeslot and a reception timeslot by mutually synchronizing with an opposing DSL modem apparatus;
transmitting a data signal to the opposing DSL modem apparatus during a transmission timeslot; and
receiving a data signal from the opposing DSL modem apparatus during a reception timeslot.
5. A communication control method between DSL modem apparatuses mutually connected via a metallic cable, the method comprising:

P24206.S01

transmitting transmission data from one DSL modem apparatus using a plurality of sub-carriers simultaneously; and

decoding the transmission data in the plurality of sub-carriers by the other DSL modem apparatus,

wherein a transmission timeslot and a reception timeslot are alternatively switched when both DSL modem apparatuses mutually synchronize, and data signals are mutually exchanged by using the same range of sub-carriers.